

Technical Data Sheet

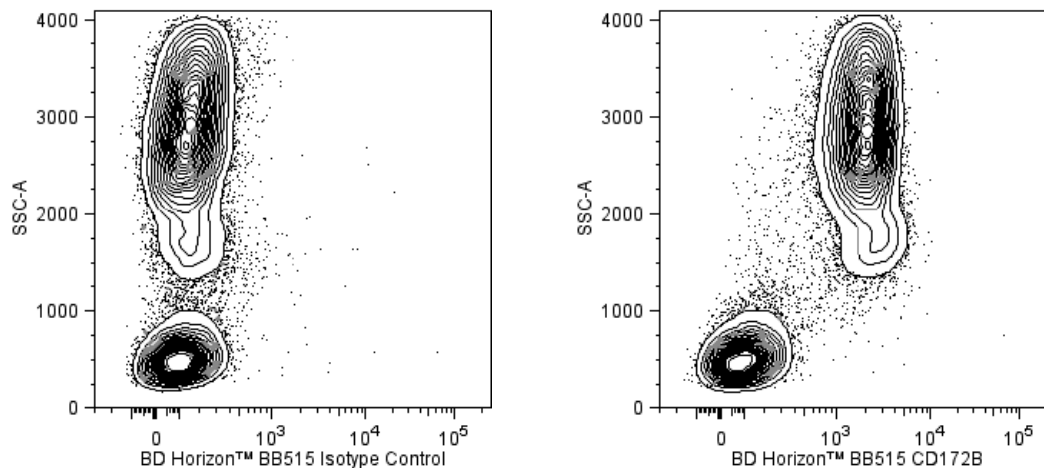
BB515 Mouse Anti-Human CD172B**Product Information**

Material Number:	566019
Alternate Name:	SIRPB1; SIRP-BETA-1; SIRPβ1; SIRPbeta; SIRP beta
Size:	25 Tests
Vol. per Test:	5 µl
Clone:	B4B6
Immunogen:	Human SIRPβ1 extracellular domain Recombinant Protein
Isotype:	Mouse (BALB/c) IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	VIII 80164
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The B4B6 monoclonal antibody specifically binds to CD172b, which is also known as Signal regulatory protein β (SIRPβ), or SIRP-beta-1 (SIRPB1/SIRPβ1). CD172b is a 50 kDa, type I transmembrane glycoprotein that belongs to the SIRP family within the Ig gene superfamily. CD172b has a transmembrane domain that contains a positively-charged lysine residue. This allows CD172b to interact with a transmembrane signaling adaptor protein, DAP12/KARAP, and transduce stimulatory signals into cells. CD172b is expressed on monocytes, macrophages, dendritic cells, and granulocytes. It is not expressed on CD34+ cells. CD172b/SIRPβ and its counterpart, CD172a/SIRPα, appear to have complementary roles in signal regulation and may work together in tuning cellular responses to certain ligands. This clone has been reported not to cross-react with CD172a.

The antibody was conjugated to BD Horizon BB515 which was developed exclusively by BD Biosciences. With an excitation max of 490 nm and an emission max of 515 nm, BD Horizon BB515 can be excited by the 488 nm laser and detected in a standard FITC set (eg, 530/30-nm filter). This dye provides a much brighter alternative to FITC with less spillover into the PE detector.



Multiparameter flow cytometric analysis of CD172b expression on human peripheral blood leucocytes. Human whole blood was stained with either BD Horizon™ BB515 Mouse IgG1, κ Isotype Control (Cat. No. 564416; Left Plot) or BD Horizon BB515 Mouse Anti-Human CD172b antibody (Cat. No. 565092/566019; Right Plot). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD172b (or Ig isotype control staining) versus side light-scatter (SSC-A) signals were derived from gated events with the forward and side light-scatter characteristics of intact leucocyte populations. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BB515 under optimum conditions and unconjugated antibody was removed.

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Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

For optimal results, it is recommended to perform 2 washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794).

Suggested Companion Products

Catalog Number	Name	Size	Clone
565092	BB515 Mouse Anti-Human CD172B	50 Tests	B4B6
564416	BB515 Mouse IgG1, κ Isotype Control	100 μ g	X40
349202	BD FACSTM Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
563794	Brilliant Stain Buffer	100 Tests	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^6 cells in a 100- μ l experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. The manufacture, use, sale, offer for sale, or import of this product is subject to one or more patents or pending applications. This product, and only in the amount purchased by buyer, may be used solely for buyer's own internal research, in a manner consistent with the accompanying product literature. No other right to use, sell or otherwise transfer (a) this product, or (b) its components is hereby granted expressly, by implication or by estoppel. Diagnostic uses require a separate license.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
7. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Dietrich J, Cella M, Seiffert M, Bühring HJ, Colonna M. Cutting edge: signal-regulatory protein beta 1 is a DAP12-associated activating receptor expressed in myeloid cells. *J Immunol.* 2000; 164(1):9-12. (Biology)

Florian S, Sonneck K, Czerny M, et al. Detection of novel leukocyte differentiation antigens on basophils and mast cells by HLDA8 antibodies. *Allergy.* 2006; 61(9):1054-1062. (Clone-specific: Flow cytometry)

Seiffert M, Brossart P, Cant C, et al. Signal-regulatory protein alpha (SIRPalpha) but not SIRPbeta is involved in T-cell activation, binds to CD47 with high affinity, and is expressed on immature CD34(+)CD38(-) hematopoietic cells. *Blood.* 2001; 97(9):2741-9. (Immunogen: Flow cytometry, Immunoprecipitation)

Seiffert M, Cant C, Chen Z, et al. Human signal-regulatory protein is expressed on normal, but not on subsets of leukemic myeloid cells and mediates cellular adhesion involving its counterreceptor CD47. *Blood.* 1999; 94(11):3633-3643. (Biology)

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